THE "COMMONS" IN SOUTHERN CALIFORNIA

John Fregonese

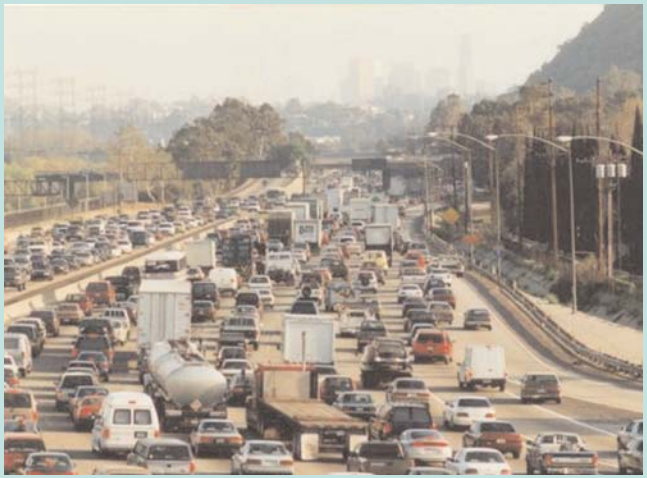
In a small fishing village, 10 fishing boat captains meet to discuss a dilemma. Each year, there are fewer and fewer fish to catch. In order to feed their families, they range farther and farther in search of more fish, and still the catch diminishes. Their conclusion is they are over fishing and that if something is not done the fishery will collapse.

If they cooperate, each of them will fish a little less, and the fishery will recover. But if only one violates the pact, that one will reap a bounty and the rest will suffer. Their dilemma, in essence, is that as long as they act individually with no cooperation, they are forced to compete for the few remaining fish. But by joining forces and working together, they all benefit consistently and for the long term.

What does this story have to do with the Southern California region? It is one of the many parables that illustrates a form of market failure – one in which competition for a shared resource ultimately wreaks havoc for everyone, including the individual. While the basis of our free market system is that society is better off when everyone tries to maximize his or her own personal advantages, in some cases, when everyone is competing for the same limited resource, everyone is worse off.

Garrett Hardin conveys this concept eloquently in his 1968 article, "The Tragedy of the Commons," which examines a common pasture used freely by the village herdsmen:

> "Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another.... But this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit – in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a commons brings ruin to all."

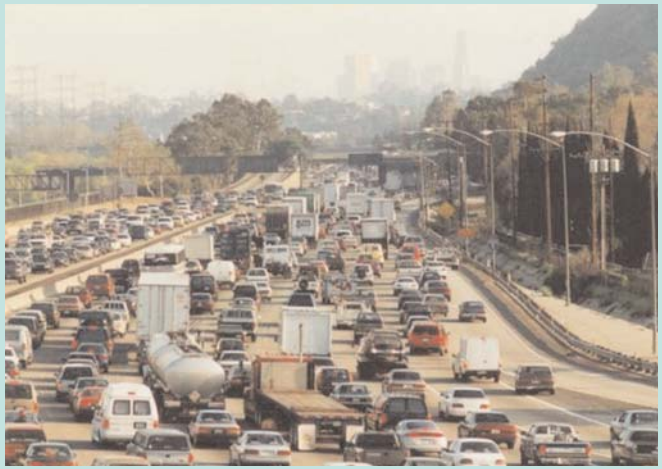


The tragedy of the commons leads to pollution of our air.

This dilemma is one that regions of all sizes and in all parts of the world grapple with. By its very nature the modern metropolis is filled with areas of common and community-wide use – its

transportation system, air, water and natural beauty, just to name a few. As a result, there is an inherent tendency to overuse the commons – to love them to death, in a sense.

Solving this dilemma can be vexing and problematic. It's tempting to simply increase the supply of the commons (e.g., add lanes to the road system), which works for a while but ultimately cannot keep pace with the increased demand. Other potential solutions continue to frustrate those who justifiably worry that regions will suffer if the prevalent thought is that things will all somehow magically work out.



Adding lanes is a tempting fix, but ultimately does not solve the problem.

The Southern California Association of Governments (SCAG) is the only regional planning organization in Southern California that covers the big picture of addressing a metropolitan area and its issues related to commons. SCAG has been exploring solutions – in the form of a regional vision called the "Compass" project – that possibly will reduce the "tragedy of the commons."

While there are many facets to the Compass project, among the most noteworthy is the creative approach that could be used to manage transportation, other than by increasing supply. The beauty of the Compass project is that it points to a combination of strategies that may just work. What those of us involved in the Compass project strive for is simple yet complex: we are exploring a more civilized option in keeping the regional commons in good condition by creating a cooperative agreement that allows for independence while also improving the quality of life.

The Nature of the Metropolis

Southern California is many things to many people – the region boasts an enviable setting, with a moderate climate and varied terrain that ranges from sandy beaches to rolling hills, snow-capped mountains to captivating deserts. Its diverse cultural mix provides residents and visitors with a strong sense of community, endless entertainment possibilities, and abundant

These green hills of Ventura County help make Southern California a desirable place to live.

enrichment opportunities. The region – whose dynamic economy is the 12th largest in the world and one of the largest concentrations of employment, income, business, industry and finance – promises that prosperity is within reach for everyone. All of this, to millions of people, continues to make Southern California a very desirable place to live.

Despite its sheer size, it often is not recognized by its residents as one of the largest metropolises in the world. Called "citistates" by Neil Pierce, large settlements such as Southern California are the source of most of our economic growth and soon will become where the vast majority of people live. This century will see the formation of many citistates of 20 million residents of more – and Southern California not only will be among them, it will be a leader in many ways.

It is the nature of the American metropolis, however, that regions are politically divided into many local governments, and for good reason. Some of the most important local services, such as police and fire protection, are provided most efficiently by smaller units of governments. Land-use decisions, too, typically are best handled at a small scale – by a small city or neighborhood.

But in many cases, local governments must cooperate for some services – transportation being a good example. Because large capital projects such as a regional freeway or transit system are beyond the ability of individual cities to fund or create, regional agencies have been created.

Perhaps the interesting thing about the Southern California region is that its regionalism is so obvious when viewed from the large scale (such as from space or by satellites). People recognize that their community is not defined by the city or county boundaries but by the metropolis itself. Nevertheless, the prevailing opinion has been, even among esteemed land-use and regional planning colleagues, is that it is really several regions, or is simply too large to manage.

While there are many strong sub-regional forces in this region, the obvious also is true – that this is one region, and our failure to comprehend this is both a lack of readily accessible regional data and a failure of imagination. Certainly if huge metropolitan areas such as New York and London can understand and define their regional issues, Southern California can as well.

The Compass project points to this overarching theme as the foundation of all that the region hopes to accomplish. Compass strives to bring a regional approach that is valid, that adds important perspectives, and that provides a strong context of sub-regional and local perspectives. All of these elements are essential for managing the future of this dynamic area.

Scenario Planning: A New Approach

Looking into options for Southern California requires going far beyond the traditional planning approaches used in most cities. One extremely useful tool for large regional planning is a model known as "scenario planning, which has been used effectively to help metropolitan areas plan for a future that is, by definition, unpredictable.

The future is not fixed. Scenarios show us that various futures are possible, depending on the choices we make.

Scenarios essentially are stories about what might be. They are not forecasts, and they are not predictions. They are possible futures that are based on what already exists, on trends that are evident, on the values and preferences of a region, and on decisions that might actually shape future outcomes. They are created by considerable public input. Usually three or four scenarios are constructed as a way to compare outcomes and learn about the forces shaping the future. The point, of course, is to find out which strategies work best in which scenarios. If a strategy works in any scenario, it is deemed robust – it's a safe bet. If a strategy works in only one scenario, it is fragile and should be approached cautiously, with a strong awareness of the possible downsides.

The purpose of this growth visioning process is to determine how to create a shared regional vision with strategies that are as robust as possible.

Models

One of the problems in developing realistic scenarios is the size and complexity of such a huge region. To help manage this problem, computer models were used extensively in developing these scenarios. They act as representations of reality that are used to learn, to teach and to explore new possibilities.

For Compass, three computer models developed by SCAG were used in preparing and evaluating the scenarios.

- A forecasting model used to develop future demographics and economic factors.
- A land-use model that provides detailed information about the 35,000 square miles within the SCAG region.
- A transportation model used to design and evaluate future transportation systems.

Land Use and Transportation Strategies

In keeping with the philosophy of scenario planning, a research project was begun in partnership with the SCAG Regional Transportation Plan team to examine several scenarios and to see what effects the various land-use alternatives would have on transportation performance. While many theories have been discussed in the past, there has been little applied pragmatic work to examine what realistic choices are available to the residents of Southern California. This research was undertaken with the understanding that experimentation of this type would inform both the SCAG Regional Transportation Plan and the Compass Vision.

To study the effect of alternative land-use designs on regional transportation performance, two "bookend" land-use scenarios were created for the Southern California region. These became known as the PILUT (Planning for Integrated Land Use and Transportation) scenarios. PILUT 1 and PILUT 2 are like two different snapshots of the future – they imply different consequences for the region. The two scenarios were built with the idea that the information gained would help create the Growth Vision. The idea was that perhaps one scenario would evolve into a vision of the future, or elements of both would be combined to create a regional vision. They were compared with a trend projection, or an extrapolation of current trends applied to the landscape and policies in place during the past decade.

Building the PILUT Scenarios

The scenarios were built by modeling development types, representing a mix of land uses, throughout the region. The 15 development types are based on existing areas in Southern California.

The components of the development types are the "building types," which were established based on real world examples found within the Southland. The building types represent a wealth of data – from jobs and housing types to the mix of land uses to building height and parking requirements – applied at the smallest level of geography available (about five acres). Each development type represents a unique grouping of building types. Development types, therefore, carry with them all the details of life necessary to understand the virtual place they represent.

At their most basic level, development types represent households and employees for a given amount of land. In addition to this simple representation of density, other related information can be gleaned as well, such as the amount of impervious surface, percentage of rental units, single-family and multi-family mix, infrastructure costs, and other derived assumptions. Scenario population was derived using development types, allowing for direct comparisons between them via evaluation criteria such as land consumption, comparative infrastructure costs, and housing and job profiles.

PILUT 1

This alternative is often referred to as the "infill" scenario. It is based on an intense realization of the growth potential found in the Coastal Basin of Los Angeles and Orange counties and in the San Fernando Valley. In PILUT 1, both jobs and housing growth would be focused on existing centers and corridors throughout the region. The majority of the workshop maps employed similar strategies for accommodating growth.

In this scenario the city of Los Angeles, building upon its growing multi-ethnic population, would be transformed into an international city rivaling any in the world. Los Angeles would be home to significant amounts of growth, most of it occurring through infill development. The intensive network of transportation corridors would require a great deal of reinvestment, creating highly desirable places to live near the jobs of the central city, as well as locating both jobs and households near excellent transit service.

PILUT 1 focuses growth in areas that are already developed.

Beyond the Coastal Basin, cities would experience a large amount of investment. To reduce trips and make transit more widely available, development that might currently locate along interchanges instead would be focused on the combination of existing well-connected road networks, transit access and existing services. This development would be mixed use, with close proximity to goods and services for new households.

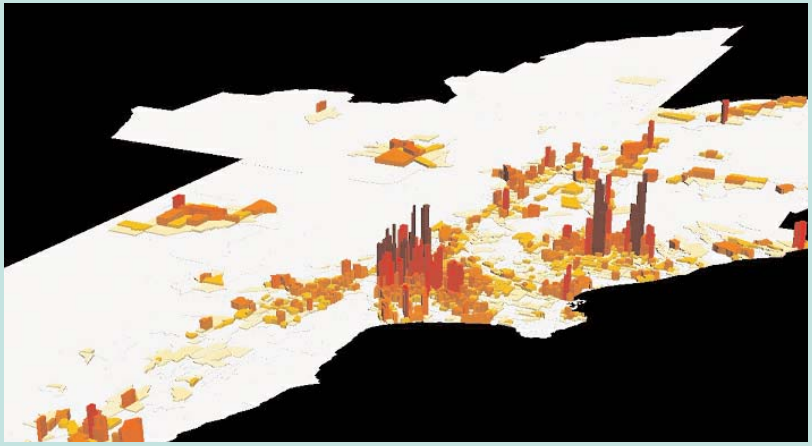
PILUT 2

This alternative is often referred to as the "fifth ring" scenario. It is based on a broad distribution of future growth in the region. While the basin is still popular, an increasing share of growth will locate in newer cities. Places such as Palmdale and Ontario would become regional centers, with growth similar to that experienced by Orange County in the '60s and '70s. Because most of the development occurs at the edge of what is developed today, many currently separate towns and cities would grow together. Growth of the outer ring cities would transform the region, bringing economic growth to areas that have seen mostly housing development during the last decade. The region will become even more polycentric, with Palmdale, San Bernardino/Riverside, and Los Angeles operating as the three large centers from which growth extends.

With the outward expansion in business growth, Los Angeles would not see the extent of growth seen in PILUT 1. With job growth focused around the Ontario airport, San Bernardino and Riverside would merge to become one unified job destination. Palmdale would grow at a rate and density similar to Las Vegas during the last decade – minus the casinos, of course.

There would be a significant number of new jobs coming to these emerging areas as manufacturing finds its place among the new investments in airports and centers. Accompanying all of these jobs are thousands of new homes, ensuring a balanced mix of jobs and housing that will allow the transportation system to work most efficiently.

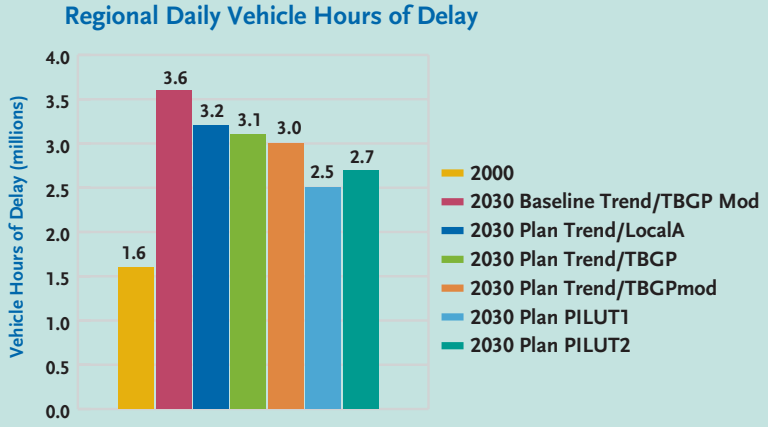
Within the centers themselves, housing will play a smaller role, since commerce is the undeniable king. These areas, however, would be home to a significant number of homes, primarily multi-family with some small lot single-family homes at the edge. Redevelopment and infill would continue to play a role in developing new housing, likely continuing at roughly the same pace as today.



PILUT 2 places more growth in the High Desert.

PILUT Performance

The two PILUT scenarios, both using land use integrated with transportation, turned out far better in the modeling results than the trend-based scenarios and the composite of local plans. Specifically, with the same amount of investment, there was significantly less congestion and more transit and walking than if the region continues as is (the complete results are available on the SCAG website). When the results are taken in whole, it is clear that either of the PILUT land-use scenarios would be superior to the trend scenarios – and they would achieve the equivalent of billions of dollars of transportation investments. Clearly, smart land-use choices are one of the best potential strategies that can and should be used.

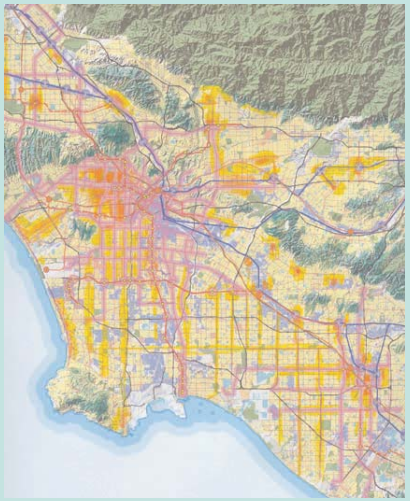


Putting it Together: the Growth Vision

Lessons Learned, Discoveries

Fundamental among our "lessons learned" is that the physical limits on developable land, from mountains and streams to existing development, will require finding new ways for the region to grow. Unable to rely on a never-ending supply of usable vacant land, cities and developers will need to look toward mixed-use development and locating new jobs and houses in developed areas that are capable of supporting growth.

The region is rich with efficient and well-connected centers and corridors. These are prime areas where investment in infrastructure can act as a catalyst to focus growth. Development in these areas provides residents with many options for travel – from foot to bus to car – and minimizes reliance on scarce vacant land. Modeling has shown that intensifying growth in these areas, along with creating a mix of uses, has a great effect on reducing regional congestion and the need for travel.



Southern California is fortunate to have well-connected transportation infrastructure in many areas

Residents of the Southland are more likely to accept higher-density development, especially when it brings investment to areas in need or preserves the region's open space. There is increasing evidence that traditional forms of higher density housing, when combined with the proper amenities and urban environment, are successful in the marketplace.

The amount of land that the region might consume is not as dependent on differing policy choices as it is in many smaller regions surrounded by rural land. In the above cases, the infill scenario (PILUT1) consumed 300,000 acres, the fifth ring scenario (PILUT2) 500,000 acres, and the trend scenario 350,000 acres. While these are large numbers, they are comparable to the land consumption forecast of other smaller regions such as Nashville or Austin with only a fraction of the population increase.

The strategy of combining compact, mixed-use development near major transportation infrastructure proved to be greatly beneficial in accommodating future growth. There is considerable evidence that driving is reduced in areas where land use and transportation are integrated and densities are higher. In a congested region such as the Southland, integration of land use and transportation has an even greater effect.

A Proposed Vision for Southern California

The issue of protecting the transportation commons is a real conundrum for Southern California. According to surveys conducted by the SCAG team in 2002, transportation is the #1 growth related issue by far. People clearly want a complex solution – they consistently reject simple solutions such as having all roads or all transit. They have a mixed reaction to infill – the idea is intriguing and popular, but it can be fearful when it gets close to home.

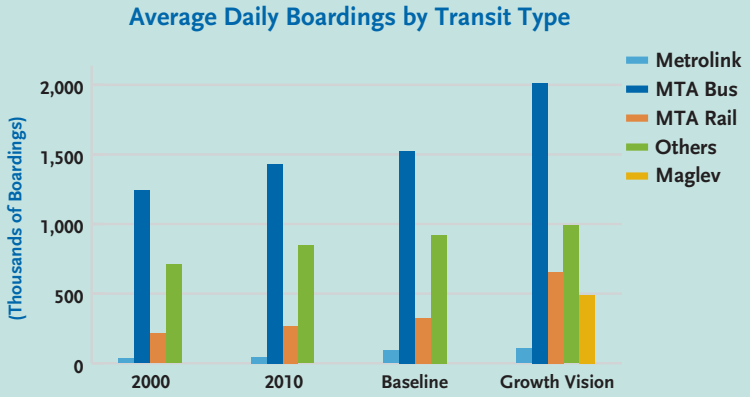
The key is to find a way to integrate the benefits of the strategies into shaping how the region will grow and change. Clearly, this will rest heavily on the many benefits, but an infill strategy also can be appealing for different reasons – downtown and main street revitalization is a popular and efficient way to reduce transportation demand. If the right places can be identified by the entities with local, sub-regional, and regional vision, the region will have a winning combination when it comes to infill.

The creation of the Growth Vision alternative is one way to combine these principles into a viable strategy – and to improve the regional commons by a cooperative strategy. It's important to note that there are many ways to configure the Growth Vision alternative and still achieve the same (or better) results. The important decisions are the principles, strategies and performance of the results. In crafting a practical Growth Vision for the region, we should strive to achieve high performance and beneficial results – while tailoring the land use and investments to local needs and desires.

Results

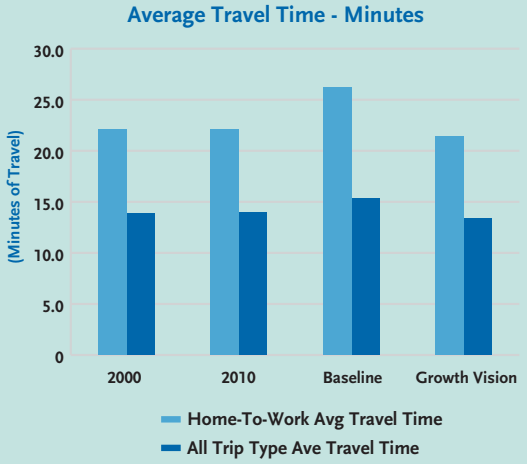
To test the ideas the team built and tested a scenario – with some impressive benefits. Certainly, while the specifics may change, the best overall improvement in transportation is derived from a strategy based on increasing supply and dampening demand.

In the Growth Vision alternative, the Riverside and San Bernardino High Desert modeling zones absorb the most greenfield development, or new development on vacant land.



Ventura and Orange counties have the least development on vacant land. Los Angeles Basin absorbs the most growth – both households and employees – through infill, far more than any other modeling zone. Orange County also absorbs nearly half of its new households through infill.

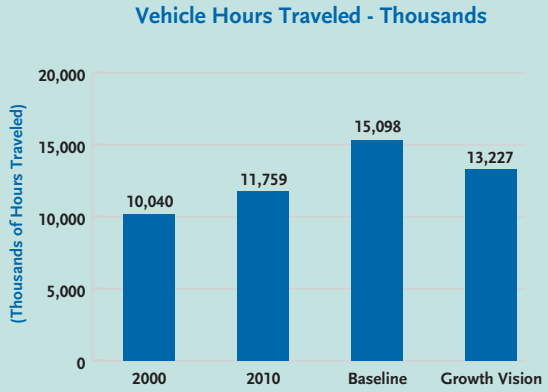
The Growth Vision alternative has much higher transit ridership than the baseline alternative of continuing with current trends.



Total daily transit boardings increased 48 percent in the Growth Vision alternative compared to the baseline. Metropolitan Transit Authority bus boardings increase 32 percent over the baseline and increase 62 percent over the current level. The baseline increases only 22 percent over the current level.

While the baseline increases the current average travel time to work by 18 percent, the Growth Vision alternative actually decreases the average travel time by 3 percent. The Growth Vision alternative also decreases the average travel distance to work, while the baseline increases average travel distance. The Growth Vision alternative decreases average travel distance to work by 2 percent as compared to the baseline.

Both the baseline and the Growth Vision alternatives decrease the average travel distance for all trips compared to the current average travel time. The Growth Vision alternative, however, decreases the average travel time for all trips by 3.6 percent compared to the current time, while the baseline increases the average travel time by 10 percent, from 13.9 minutes to 15.3 minutes. The Growth Vision alternative decreases average travel time by 12.4 percent compared to the baseline.



The Growth Vision alternative performs even better when considering total hours of travel. While the baseline increases hours of travel by 50 percent compared to the current level, the Growth Vision alternative increases the hours of travel by only 30 percent compared to the current level — reducing the hours of travel by 13 percent compared to the baseline.

While the rate for driving alone decreases in both alternatives, the Growth Vision alternative shows a greater increase in the transit mode split. The percentage of people using transit to get from home to work or school increases from less than 5 percent currently and in the baseline to 7.5 percent in the Growth Vision alternative. This represents an increase of 56 percent.

Strategies And Performance

Many Los Angeles area residents may ask why the Growth Vision performs better than the baseline scenario. What strategies contributed to the Growth Vision's superior performance? These carefully constructed strategies provide an important explanation for these questions.

The Growth Vision alternative was created by developing a mix of land uses following certain guidelines:

- Locate growth in areas with robust existing transportation infrastructure (i.e., lots of streets)
- Locate growth in centers and along transportation corridors
- Locate growth near transit corridors/stations
- Locate jobs near housing and vice versa

- Locate heavy trip-generating development in areas with robust existing transportation infrastructure
- Avoid sensitive environmental features such as steep slopes, wetlands and stream corridors

Adhering to these guidelines resulted in the following development patterns, which explains the excellent performance of the Growth Vision:

Compact, corridors and centers focused development

As described above, the Growth Vision is not much more compact than the baseline scenario. But in the Growth Vision alternative, growth was located, as much as possible, in centers and along corridors. Growth was primarily located in existing centers and corridors, but if none existed, new centers and corridors were created.

Centers and corridors often have robust transportation networks that can accommodate more growth.

Locating growth in centers improves transportation performance in several ways. First, the centers themselves usually have a strong street network. There are many streets, options, and ways to reach a destination, so that not everyone uses the same road at the same time. Secondly, centers usually are easy to access. They usually are near freeway exits or at the intersection of other important roadways. Finally, centers usually are accessible by transit, with transit possibly providing mobility within the center as well. These factors allow centers to absorb growth without as much strain on the transportation system.

In addition, when employment and housing are located in centers and along corridors, trips become shorter. Housing, shopping, errands, recreation, entertainment and employment are more likely to be nearby. Even if housing or employment is elsewhere, the center or corridor encourages trip chaining for other needs such as shopping and errands.

Mixed- use development

The Growth Vision employs mixed-use development, which ensures a mix of jobs and housing. Similar to the centers-focused strategy, mixed-use development brings daily errands within reach, shortening the two-thirds of trips that are not related to commuting.

Transit-oriented development

The Growth Vision located as much growth as possible near transit corridors and stations. In some cases, transit stations grew into mixed use, pedestrian-friendly centers, designed so that

The Growth Vision located growth near transit stations and corridors.

people can access them via transit and then walk to other destinations.

Centers-based, transit-oriented development is particularly important for employment. Dispersed employment is nearly impossible to serve via transit because it is too expensive and time-consuming. For commuting by transit to be feasible, employment density is even more important than housing density. Dispersed housing can be served by park-and-ride facilities, but dispersed employment cannot. Destinations (employment) must be close to transit stations. In the Growth Vision, employment density near transit corridors/stations was very high, in order to locate as many jobs as possible near transit, and to make transit a viable commute option.

What's Next?

To become a long-term blueprint for the region, the strategies must evolve into a vision – a common path that reflects the diverse ideas and passions of many people and interests with a shared goal of working together to create a better future.

Fifty years ago, Southern California had a common vision for its future. That vision was based on a shared set of values as well as workable strategies needed to achieve that vision. In today's world, regional problems and their potential solutions are much more complex. Fortunately, there are many efforts under way in the Southland to craft a viable solution that will match the today's regional values. Compass only one of many important efforts. Regardless of varying opinions, everyone's ultimate goal is the same: to identify solutions that will allow us to move into the future with confidence and optimism.

Finding a common vision will help make the future better for ourselves as well as the next generation.

While the solutions remain elusive, it is clear that there are shared values in this region that form the basis of a strong common vision. It is also clear that the Southern California region is in the position of the fisherman worried about the declining fishery. The commons is under stress, and things are getting worse. If we don't cooperate, we will all be worse off – both individually and collectively. SCAG cannot develop or implement this vision alone. The region's leadership and the creation of a shared vision will require the efforts and collaboration of hundreds of groups and thousands of leaders.

The key to success now is the most difficult – discovering the specific action that people can agree on to make the region of their hopes come to fruition. To this end, SCAG, its member governments, and the hundreds of other organizations all must contribute and work together. SCAG, for its part, is ready to do its part to protect the regional commons.

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